Michigan BRFS

MICHIGAN BRFSS SURVEILLANCE BRIEF

A NEWSLETTER FROM THE CHRONIC DISEASE EPIDEMIOLOGY SECTION, MDCH

Current Major Depression among Michigan Adults

Background

Reports from the National Institute of Mental Health indicate that major depressive disorders affect nearly 15 million American adults, or about seven percent of the United States population aged ≥ 18 years in a given year.[1] Major depressive disorders are also the leading cause of disability among U.S. adults ages 15 to 44 years.[2]

Various effective treatments for depression are currently available in the U.S., but less than 50% of individuals who have this illness ever seek treatment. Many people resist treatment because they believe their depression is not serious, while others have their depression go untreated because their health care providers are focusing on the other chronic conditions that are present.[3]

Methods

In 2006, the ten-question CDC Anxiety and Depression optional module was added to the Michigan Behavioral Risk Factor Survey (MiBRFS). The first eight questions within this module were from the Patient Health Questionnaire 8.[4] The responses from these eight questions were converted into point values and summed to create a depressive symptoms severity score (DSSS). Those respondents with a depressive symptoms severity score of ten or greater were classified as having current major depression.

Analyses of these questions were conducted in order to estimate the prevalence of major depression in Michigan adults and investigate the association between major depression and other chronic conditions and health behaviors. In order to control for the effects of other variables, logistic regression models were developed that included age, gender, race, education, and income as potential confounders. Adjusted odds ratios from these regressions are presented.

Results

The overall distribution of 2006 MiBRFS respondents by depressive symptoms severity score is presented in Figure 1. In 2006, an estimated 10.2% of Michigan adults were classified with current major depression (DSSS ≥ 10) (Table 1). Females (12.1%) were more likely than males (8.2%) to have been classified with current major depression. In addition, current major depression was found to be more prevalent in younger age categories, lower education status, and within lower household income levels.

Upon characterizing the prevalence of current major depression among Michigan adults, it also becomes important to investigate

MiBRFSS News

- The 2008 Michigan BRFS is in its final stages of data collection.

- Pretesting of the 2009 Michigan BRFS questionnaire is well underway and the questionnaire should be finalized in the near future.

- Did you miss an issue of *Michigan BRFSS Surveillance Brief?* Back issues are available on our website: www.michigan.gov/brfs.

Figure 1. Depressive Symptoms Severity Score Distribution 2006 MiBRFS

- None (0-4 pts)
- Mild (5-9 pts)
- Moderate (10-14 pts)
- Mod. Severe (15-19 pts)
- Severe (20+ pts)

72.0% · 17.8% · 6.1% · 2.9% · 1.2%
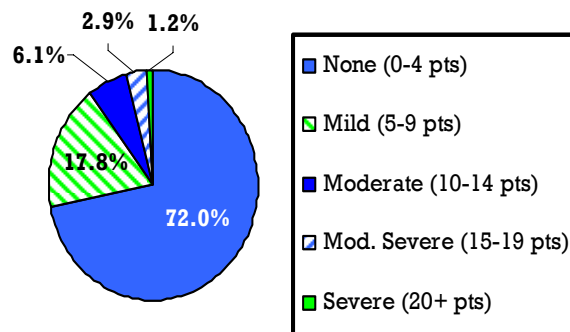
Table 1. Prevalence of Major Depression (Depressive Symptoms Severity Score >= 10)

	%	95% CI
Total	**10.2**	**9.2-11.3**
Age		
18 - 24	14.0	10.0-19.3
25 - 34	12.4	9.6-16.0
35 - 44	10.2	8.2-12.5
45 - 54	9.5	7.8-11.5
55 - 64	10.5	8.6-12.8
65 - 74	6.3	4.5-8.8
75 +	4.5	3.0-6.8
Gender		
Male	8.2	6.8-9.9
Female	12.1	10.8-13.6
Race-Ethnicity		
White, non-Hispanic	9.4	8.4-10.5
Black, non-Hispanic	12.0	8.7-16.5
Other, non-Hispanic	19.2	12.8-27.8
Hispanic	12.0	5.9-22.9
Education		
< High School	20.6	15.2-27.3
High school graduate	12.5	10.6-14.7
Some college	11.1	9.3-13.2
College graduate	4.4	3.4-5.7
Household Income		
< $20,000	26.0	21.7-30.8
$20,000 - $34,999	12.7	10.2-15.6
$35,000 - $49,999	10.7	8.3-13.8
$50,000 - $74,999	5.8	4.4-7.7
>= $75,000	3.6	2.5-5.2

Results (continued)

the relationship between current major depression and other chronic conditions and health behaviors.

With the exception of asthma and stroke, the odds of having major depression were significantly higher among those with any of the chronic conditions examined (Figure 2). The highest odds of major depression was found for individuals with a disability (OR = 7.40 [95% CI: 5.49-9.99]).

Increased odds of major depression were also found for individuals with selected health behaviors (Figure 3). Individuals who reported fair to poor general health (OR = 6.08 [95% CI: 4.45-8.30]), current smokers (OR = 1.51 [95% CI: 1.14-2.01]), and those who did not normally participate in any leisure-time physical activity (OR = 1.80 [95% CI: 1.36-2.37]) had higher odds of being classified with current major depression when compared to those without the adverse health behavior. The odds were not significantly higher among heavy drinkers and those who had not had an annual checkup.

The relationship between major depression and number of co-morbid conditions was also investigated. When including the number of co-morbid conditions in a logistic regression model with major depression as the outcome, the odds of major depression significantly increased with increasing number of co-morbid conditions (Figure 4). When compared to individuals with no other chronic conditions, individuals with one co-morbid condition were 3.58 (95% CI: 2.50-5.12) times more likely to have been classified with current major depression, while individuals with five or more co-morbid conditions were 17.47 (95% CI: 6.33-48.21) times more likely to have been classified with current major depression.
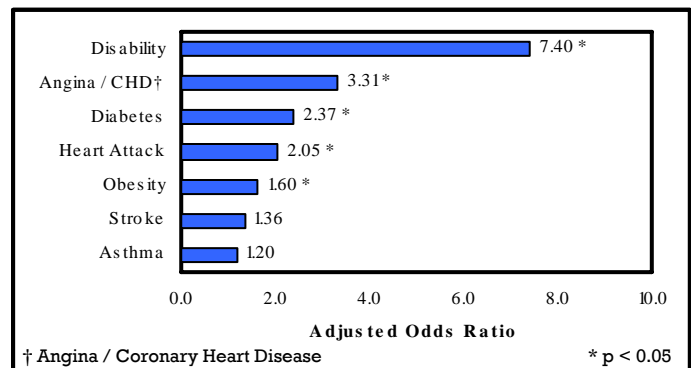
Conclusion

Major depression is a serious illness that if left untreated can become very disabling and destructive. Fortunately, major depression can be successfully treated through a variety of different methods.[3] Programs focusing on the treatment of major depression in Michigan adults, especially within individuals with other co-morbid conditions, are in great need.
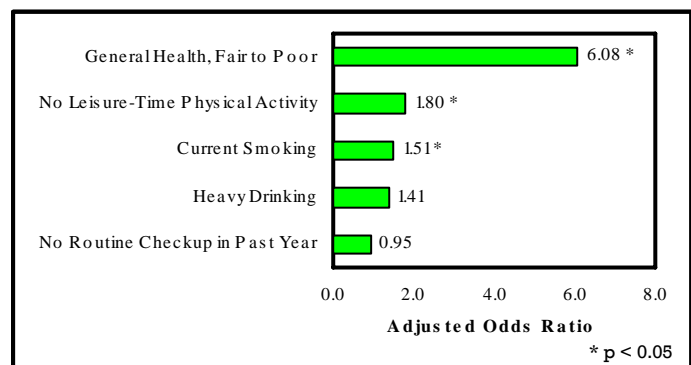
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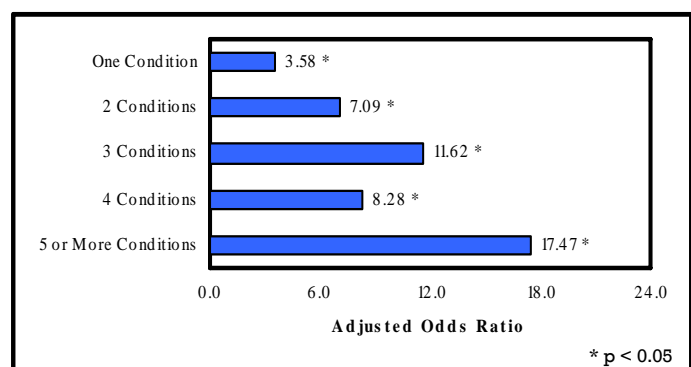
Figure 2. Odds of Major Depression among Those With Selected Chronic Conditions 2006 MiBRFS

Disability 7.40 *
Angina / CHD† 3.31*
Diabetes 2.37 *
Heart Attack 2.05 *
Obesity 1.60 *
Stroke 1.36
Asthma 1.20

Adjusted Odds Ratio

† Angina / Coronary Heart Disease   * p < 0.05

Figure 3. Odds of Major Depression among Those With Selected Health Status / Behaviors

General Health, Fair to Poor 6.08 *
No Leisure-Time Physical Activity 1.80 *
Current Smoking 1.51*
Heavy Drinking 1.41
No Routine Checkup in Past Year 0.95

Adjusted Odds Ratio

* p < 0.05

Figure 4. Odds of Major Depression Among Those With Multiple Co-morbid Conditions 2006 MiBRFS

One Condition 3.58 *
2 Conditions 7.09 *
3 Conditions 11.62 *
4 Conditions 8.28 *
5 or More Conditions 17.47 *

Adjusted Odds Ratio

* p < 0.05

The Michigan Behavioral Risk Factor Surveillance System (BRFSS)

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